

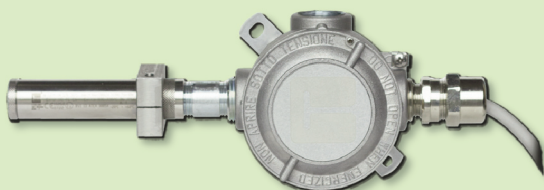
MAGNETIC PROXIMITY SWITCHES

series
IM

Protection	Gas	Zone	1-2	II2G	Ex db IIC T6÷T5 Gb
	Dusts		21-22	II2D	Ex tb IIIC T85°C÷T100°C Db

Degree of Protection	IP66
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Amb. Temp.	Standard	-20°C	+40°C
	Extended	-50°C	+80°C



Entries Threading	NPT ANSI B1.20
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Material	Stainless Steel AISI 316
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Painting	N.A.
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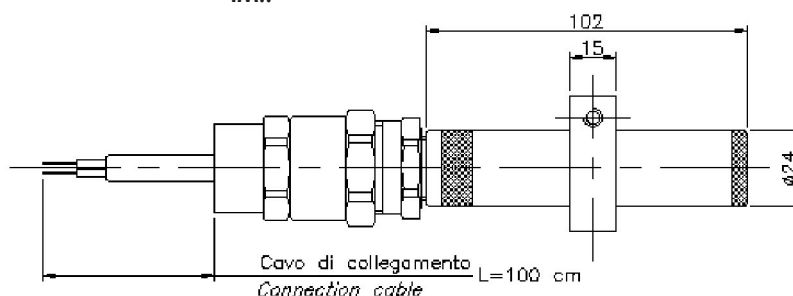
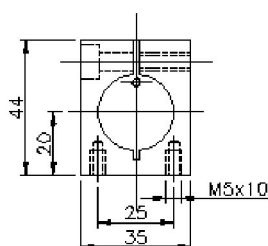
Standards and Certificates	Directive 2014/34/EU (ATEX)
	EN 60079-0 • EN 60079-1 EN 60079-31
	CE BVI 13 ATEX 0085X
	IEC 60079-0 • IEC 60079-1 IEC 60079-31
	IECEx EPS 13.0037X

- Ideal for any contactless control.
- Peculiar for applications in critical environments dominated by the presence of oils, greases, liquids, dusts, etc.
- Indispensable to detect and/or count any items passing by at remarkable speed.
- Not subject to any mechanical wear and thus, compared to traditional switches, a longer operating life is guaranteed.
- The switch actuated by a permanent magnet series MG (see page D30).
- Fixing bracket in Stainless Steel AISI 316L.
- Cable gland with female bushing 1/2" NPT ANSI B1.20 and 1 m cable included.
- Available version provided with junction box (SX 14 see page B3) and sealing nipple.

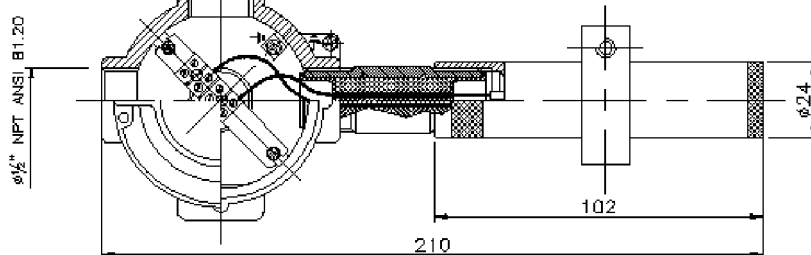
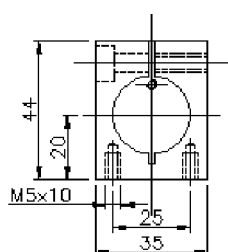
Options

- Bistable contact (Available only with 1NO contact).
- Cable gland with female bushing M20x1,5.
- Stainless steel AISI 316L cable gland.
- Cable with length other than standard.
- Junction box and sealing nipple in Stainless Steel.

IM..



IM..S..



NOTES

To read the installation and maintenance instructions is recommended.

The temperature class T6/T85°C considers an Ambient Temperature (A.T.) extended up to +60°C, whereas class T5/T100°C considers an A.T. extended up to +80°C.

Contact	Scheme	Box	Weight (g)
1 switchin		Stainless steel	370
1 Normally open		Stainless steel	370

Example: IM/U

Order CODING

Type

IM

Material (cable gland)

.. = Nikel Plated Brass
I = Stainless Steel

Junction Box

SX 14 = presence
.. = absence

Contact

U = Monostable deviation
AB = Bistable deviation

Threading

.. = NPT (N)
M = metric (M)

MAGNETIC PROXIMITY SWITCHES

series
IM

Contact elements Technical Data:

• Contact type	Switching (NO)	• Switching hysteresis	~5 mm
• Contact material	Rhodium	• Set point accuracy	0.01 mm
• Max switching power	40 VA	• Axial vibration resistance	100 gr
• Max switching voltage	250 VDC - 220 VAC	• Contact mechanical life	10 ⁸ operations
• Max current peak	1 A	• Storage temperature	-10 °C ÷ +80 °C
• Contact resistance	0.075 Ω	• Connecting cable	2x0.75 mm ² ÷ 3x0.75 mm ²
• Contact vibration time	0.3 ms		
• Switching frequency	100 Hz		

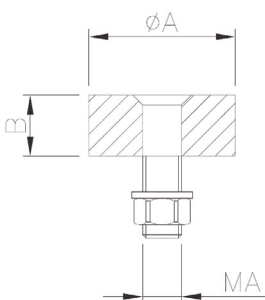
Instructions

- The enclosure must neither be distorted nor subjected to shocks since the contact element may be damaged.
- Magnetic proximity switches are sensitive to high current loads.
- As the elasticity of the contact shells is minimum, a small welding effect can cause the bonding of the contact blades.
- The opening of the contacts is very fast so that, by switching off inductive loads such as coils of relays, solenoid valves, electromagnets, etc., high voltages are determined by self-induction. To prevent the sticking of contacts the allowed max. electrical values (power, voltage and current peak) must never be exceeded.
Pay attention to the insertion current peak. The charging currents of the capacitors must be limited by appropriate pre-resistors (i.e. incandescent lamps insertion demands 3-4 times the nominal current value; consequently contacts rated for 100 W can pilot incandescent lamps lower than 25 W).
- The control of inductive loads (relays, solenoid valves, etc.) makes essential the spark suppression by inserting in parallel:
 - in d.c. a diode
 - in a.c. an RC circuit (resistance + capacitor)
- For the switching contacts the color code is as follows:
 - brown-black: contact NO;
 - brown-blue: contact NC.

PERMANENT MAGNETS

series
MG

- Used to operate the magnetic proximity switches series IM...
- Available in three different sizes.



PERMANENT MAGNETS					
Code	A	B	MA	Actuation Distance	Weight (g)
MG1	20	6	M3x16	3 ÷ 7	10
MG2	20	10	M4x20	5 ÷ 12	15
MG3	31	15	M5x20	12 ÷ 25	50

Instructions

- Permanent magnets must be mounted by countersunk screws in non-magnetic materials such as brass, aluminum, stainless steel or plastic.
- Larger switch control distance is reached when the permanent magnet is fixed directly on an iron support.
- Embedding the permanent magnet in a mass of iron causes a short circuit of the magnetic field; it is necessary provide for a distance of 1-3 millimeters from the iron surface.
This type of mounting significantly reduces the operating distance of magnetic switch.
- The permanent magnets featuring north polarity are painted red.